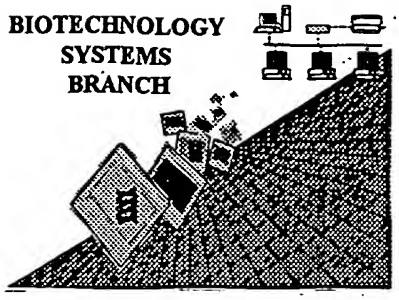
5040 SUB

BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/009,919
Source: PCT/US
Date Processed by STIC: 1/14/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom, including:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>, **EFS Submission User Manual** - ePAVE)
2. U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. **Hand Carry directly to:**
   U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
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Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/009,919

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOF

1____Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2____Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3____Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4____Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5____Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6____PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7____Skipped Sequences (OLD RULES)	Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8____Skipped Sequences (NEW RULES)	Sequence(s) ____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9____Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10____Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
11____Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12____PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13____Misuse of n	n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.

PCT10

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/009,919

DATE: 01/14/2002
TIME: 07:46:21

p.3

Input Set : A:\ES.txt
Output Set: N:\CRF3\01142002\J009919.raw

Does Not Comply
Corrected Diskette Needed

```
      5 <110> APPLICANT: Agriculture Victoria Services Pty Ltd AND Australian Pork Limited AND
      6       Pfizer
      7       Products Inc.
      9 <120> TITLE OF INVENTION: Lawsonia derived gene and related hemolysin polypeptides,
peptides and
     10       proteins
     11       and their uses.
W--> 13 <130> FILE REFERENCE:
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/009,919
C--> 17 <141> CURRENT FILING DATE: 2001-11-13
     19 <150> PRIOR APPLICATION NUMBER: US 60/134,022
     21 <151> PRIOR FILING DATE: 1999-05-12
     23 <160> NUMBER OF SEQ ID NOS: 4
     25 <170> SOFTWARE: PatentIn Ver. 2.0
     28 <210> SEQ ID NO: 1
     29 <211> LENGTH: 251
     30 <212> TYPE: PRT
     31 <213> ORGANISM: Lawsonia intracellularis
     34 <400> SEQUENCE: 1
     35 Met Ala Lys His Lys Val Arg Ala Asp Glu Leu Val Phe Leu Gln Gly
     37   1               5                  10                  15
     40 Leu Ala Glu Ser Arg Glu Gln Ala Lys Arg Leu Ile Met Ala Gly Lys
     42              20                  25                  30
     45 Val Thr Leu Thr Asn Asn Ser Thr Thr Ile Pro Leu Arg Leu Glu Lys
     47          35                  40                  45
     50 Pro Gly His Lys Tyr Pro Leu Glu Ser Ile Cys Ser Leu Ile Gly Val
     52      50                  55                  60
     55 Glu Arg Phe Val Ser Arg Gly Ala Tyr Lys Leu Leu Thr Ala Leu Asp
     57  65                  70                  75                  80
     60 Phe Phe Lys Ile Asp Val Lys Ser Cys Ile Cys Leu Asp Ala Gly Ala
     62                  85                  90                  95
     65 Ser Thr Gly Gly Phe Thr Asp Cys Leu Leu Gln His Gly Ala Ser Lys
     67              100                 105                 110
     70 Val Tyr Ala Ile Asp Val Gly Lys Gly Gln Leu His Glu Lys Leu Tyr
     72          115                 120                 125
     76 Thr Asn Glu Gln Val Ile Asn Ile Glu Gly Val Asn Leu Arg Thr Ala
     78      130                 135                 140
     81 Ser Lys Asp Leu Ile Pro Glu Glu Val Asp Ile Leu Thr Ile Asp Val
     83 145                 150                 155                 160
     86 Ser Phe Ile Ser Leu Thr Leu Ile Leu Pro Ser Cys Ile Arg Trp Leu
     88                  165                 170                 175
     91 Lys Ala Ser Gly Ile Ile Ile Ala Leu Ile Lys Pro Gln Phe Glu Leu
     93              180                 185                 190
     96 Tyr Pro Asp Lys Ile Lys Lys Gly Val Val Lys Glu Thr Ser Leu Gln
     98          195                 200                 205
    101 Tyr Glu Ala Val Glu Lys Ile Ile His Phe Cys Gln Ser Glu Leu Gly
    103      210                 215                 220
    106 Leu Ile Phe Ile Gly Val Val Pro Ser Val Ile Lys Gly Pro Lys Gly
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RAW SEQUENCE LISTING DATE: 01/14/2002
PATENT APPLICATION: US/10/009,919 TIME: 07:46:21

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Output Set: N:\CRF3\01142002\J009919.raw

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108 225                 230                 235                 240
111 Asn Gln Glu Tyr Leu Ile Tyr Leu Lys Lys Arg
113                 245                 250
117 <210> SEQ ID NO: 2
118 <211> LENGTH: 756
119 <212> TYPE: DNA
120 <213> ORGANISM: Lawsonia intracellularis
122 <220> FEATURE:
123 <221> NAME/KEY: CDS
124 <222> LOCATION: (1)..(753)
127 <400> SEQUENCE: 2
128 atg gcc aaa cat aaa gta cgt gct gat gaa ctt gtt ttt tta caa ggg   48
130 Met Ala Lys His Lys Val Arg Ala Asp Glu Leu Val Phe Leu Gln Gly
132   1               5                  10                  15
135 tta gca gaa agt cgt gaa caa gct aaa cga ctt att atg gca ggt aag   96
137 Leu Ala Glu Ser Arg Glu Gln Ala Lys Arg Leu Ile Met Ala Gly Lys
139             20                  25                  30
143 gtt aca tta act aat aat tct aca act ata cca tta cgt ttg gaa aaa   144
145 Val Thr Leu Thr Asn Asn Ser Thr Thr Ile Pro Leu Arg Leu Glu Lys
147          35                  40                  45
150 cca gga cat aaa tat cca tta gaa agt atc tgc agt tta ata ggg gta   192
152 Pro Gly His Lys Tyr Pro Leu Glu Ser Ile Cys Ser Leu Ile Gly Val
154      50                  55                  60
157 gaa cgt ttt gtg agt aga gga gca tat aag cta tta act gct cta gat   240
159 Glu Arg Phe Val Ser Arg Gly Ala Tyr Lys Leu Leu Thr Ala Leu Asp
161  65                  70                  75                  80
164 ttt ttt aaa att gat gta aaa agt tgt att tgt ctt gat gca ggc gca   288
166 Phe Phe Lys Ile Asp Val Lys Ser Cys Ile Cys Leu Asp Ala Gly Ala
168                 85                  90                  95
171 tct act ggt ggg ttt aca gat tgt ctt tta caa cat gga gca tct aaa   336
173 Ser Thr Gly Gly Phe Thr Asp Cys Leu Leu Gln His Gly Ala Ser Lys
175             100                 105                 110
178 gta tat gcg att gat gta ggc aaa ggt caa tta cat gag aaa ctg tat   384
180 Val Tyr Ala Ile Asp Val Gly Lys Gly Gln Leu His Glu Lys Leu Tyr
182         115                 120                 125
185 act aat gaa caa gtt ata aat att gag gga gtg aat tta cgt aca gca   432
187 Thr Asn Glu Gln Val Ile Asn Ile Glu Gly Val Asn Leu Arg Thr Ala
189     130                 135                 140
192 tct aaa gat ctt att cct gaa gaa gta gat att tta act att gat gtt   480
194 Ser Lys Asp Leu Ile Pro Glu Glu Val Asp Ile Leu Thr Ile Asp Val
196 145                 150                 155                 160
199 tct ttt ata tcg ctt act ttg att tta ccg tca tgt ata cgt tgg cta   528
201 Ser Phe Ile Ser Leu Thr Leu Ile Leu Pro Ser Cys Ile Arg Trp Leu
203                 165                 170                 175
206 aag gct tcc gga att att att gcc tta ata aag cct caa ttt gaa tta   576
208 Lys Ala Ser Gly Ile Ile Ile Ala Leu Ile Lys Pro Gln Phe Glu Leu
210             180                 185                 190
213 tat cca gat aaa ata aaa aaa ggt gta gta aaa gaa act agc ttg caa   624
215 Tyr Pro Asp Lys Ile Lys Lys Gly Val Val Lys Glu Thr Ser Leu Gln
```

RAW SEQUENCE LISTING DATE: 01/14/2002
PATENT APPLICATION: US/10/009,919 TIME: 07:46:21

Input Set : A:\ES.txt
Output Set: N:\CRF3\01142002\J009919.raw

```
217         195                 200                 205
220 tat gaa gca gta gaa aaa att att cat ttt tgt caa tca gaa ctt gga   672
222 Tyr Glu Ala Val Glu Lys Ile Ile His Phe Cys Gln Ser Glu Leu Gly
224     210                 215                 220
227 ctt ata ttt att ggt gtt gtt ccg tcg gta ata aaa ggt cca aaa gga   720
229 Leu Ile Phe Ile Gly Val Val Pro Ser Val Ile Lys Gly Pro Lys Gly
231 225                 230                 235                 240
235 aat caa gaa tat ctt att tac ttg aaa aaa cgt taa                   756
237 Asn Gln Glu Tyr Leu Ile Tyr Leu Lys Lys Arg
239                 245                 250
243 <210> SEQ ID NO: 3
245 <211> LENGTH: 15
247 <212> TYPE: DNA
249 <213> ORGANISM: synthetic oligonucleotide
252 <400> SEQUENCE: 3
254 aaataataag atgag                                                  15
258 <210> SEQ ID NO: 4
260 <211> LENGTH: 22
262 <212> TYPE: DNA
264 <213> ORGANISM: synthetic oligonucleotide
267 <400> SEQUENCE: 4
269 atagaataca aattataata ag                                          22
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see item 10 on Error Summary Sheet

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/009,919

DATE: 01/14/2002
TIME: 07:46:22

Input Set : A:\ES.txt
Output Set: N:\CRF3\01142002\J009919.raw

L:13 M:201 W: Mandatory field data missing, FILE REFERENCE
L:15 M:270 C: Current Application Number differs, Replaced Application Number
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date